

AMENDMENT TO THE SPECIFICATION

Please replace the second full paragraph, including the header above, on page 1 (lines 10-16) with the following paragraph:

BACKGROUND ART

BACKGROUND OF THE INVENTION

While it is said that an electroconductive (electrically conductive) polymer are generally excellent in stability against repetitive oxidation/reduction (doping/dedoping), an electroconductive polymer actually developed to a practical level is only polyaniline, but other electroconductive polymers known as wide as polyaniline, such as polypyrrole and polythiophene, have not been put to practical use as an active electrical element, primarily due to problems about durability.

Please replace the first full paragraph, including the header above, on page 2 (lines 5-11) with the following paragraph:

DISCLOSURE OF INVENTION

BRIEF SUMMARY OF THE INVENTION

During the course of an oxidizing/reducing (doping/dedoping) process, a large voltage may be applied to an electroconductive polymer, particularly in a plus direction, to induce a crosslinking reaction between polymer chains. When a film comprises relatively long polymer chains, electrons or holes traveling in the film can move along the chains almost

without deviating from the right path to cut through the film in a short time of period.
Thus, the film exhibits high conductivity.

Please replace the last full paragraph on page 5 (lines 25-28) with the following paragraph:

Further, through a reducing reaction induced in the electroconductive polymer 3, the cation radical and dication 9 in the polymer are vanished, and the dopant 8 is dedoped. The formed metal oxide/hydroxide 7 enters into the electroconductive polymer 3, and diffusingly moves therein to reside in a nano-space between polymer chains 10.

Please replace the third full paragraph, including the header above, on page 7 (lines 7-15) with the following paragraph:

~~BEST MODE FOR CARRYING OUT THE INVENTION~~

DETAILED DESCRIPTION OF THE INVENTION

A polymer to be used in the present invention is not limited to a specific type, but may be any suitable type, for example, a chain electroconductive polymer, such as polypyrrole, polyindole, polycarbazole, polythiophene derivatives (including original polythiophene: the same is applied to the following derivatives), polyaniline derivatives, poly-acetylene derivatives, poly-furan derivatives, poly-para-phenylene vinylene derivatives, polyazulene derivatives, poly-para-phenylene derivatives poly-para-phenylene sulphide

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derivatives, poly-isothianaphthene derivatives or poly thiazyl; or a polyacene-based electroconductive polymer.